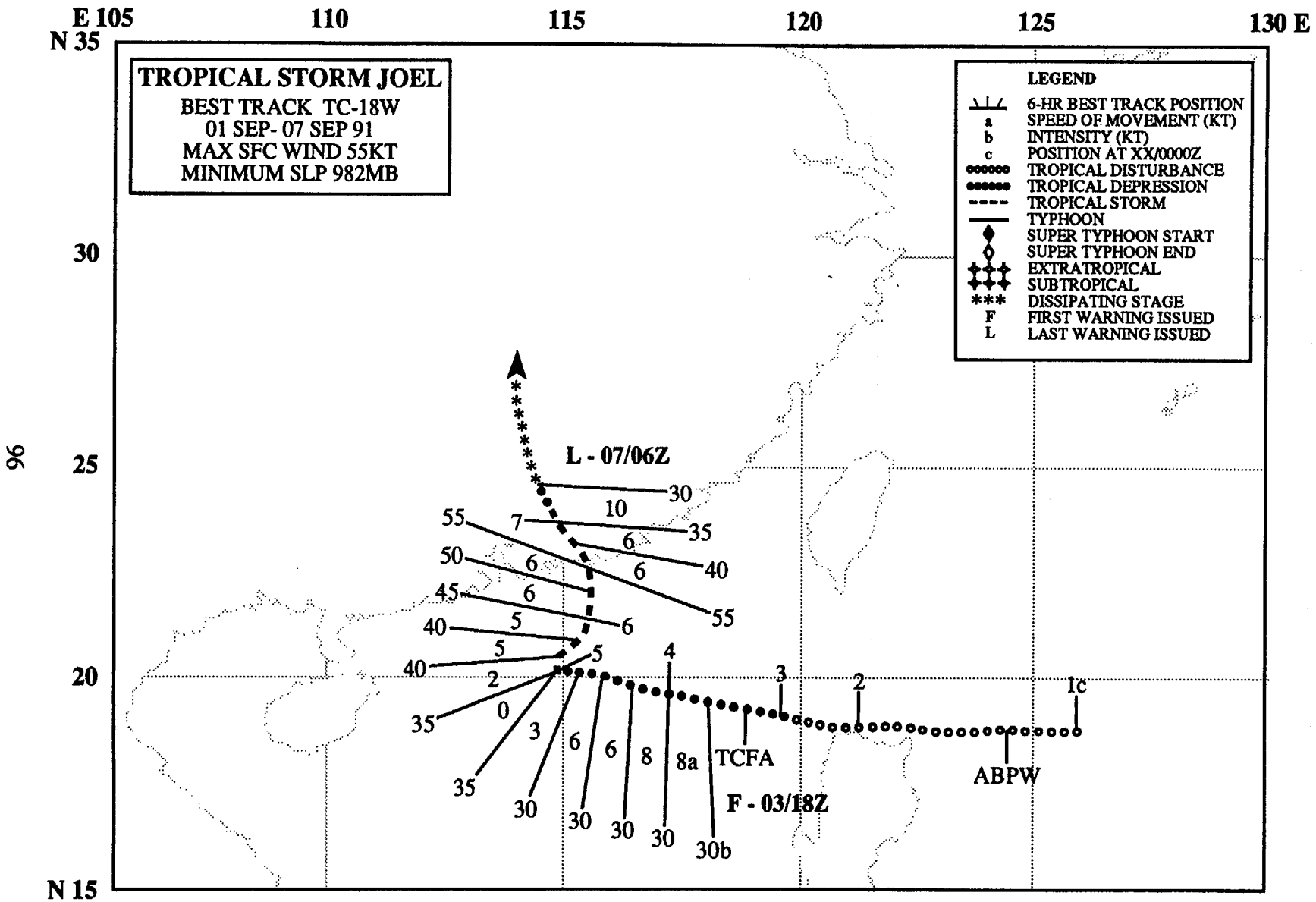
E 105
110
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125
130 E
N 35
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96
TROPICAL STORM JOEL
BEST TRACK TC-18W
01 SEP- 07 SEP 91
MAX SFC WIND 55KT
MINIMUM SLP 982MB
LEGEND
6-HR BEST TRACK POSITION
a SPEED OF MOVEMENT (KT)
b INTENSITY (KT)
c POSITION AT XX/0000Z
TROPICAL DISTURBANCE
TROPICAL DEPRESSION
TROPICAL STORM
TYPHOON
SUPER TYPHOON START
SUPER TYPHOON END
EXTRATROPICAL
SUBTROPICAL
*** DISSIPATING STAGE
F FIRST WARNING ISSUED
L LAST WARNING ISSUED
L - 07/06Z
TCFA
F - 03/18Z
ABPW

TROPICAL STORM JOEL (18W)

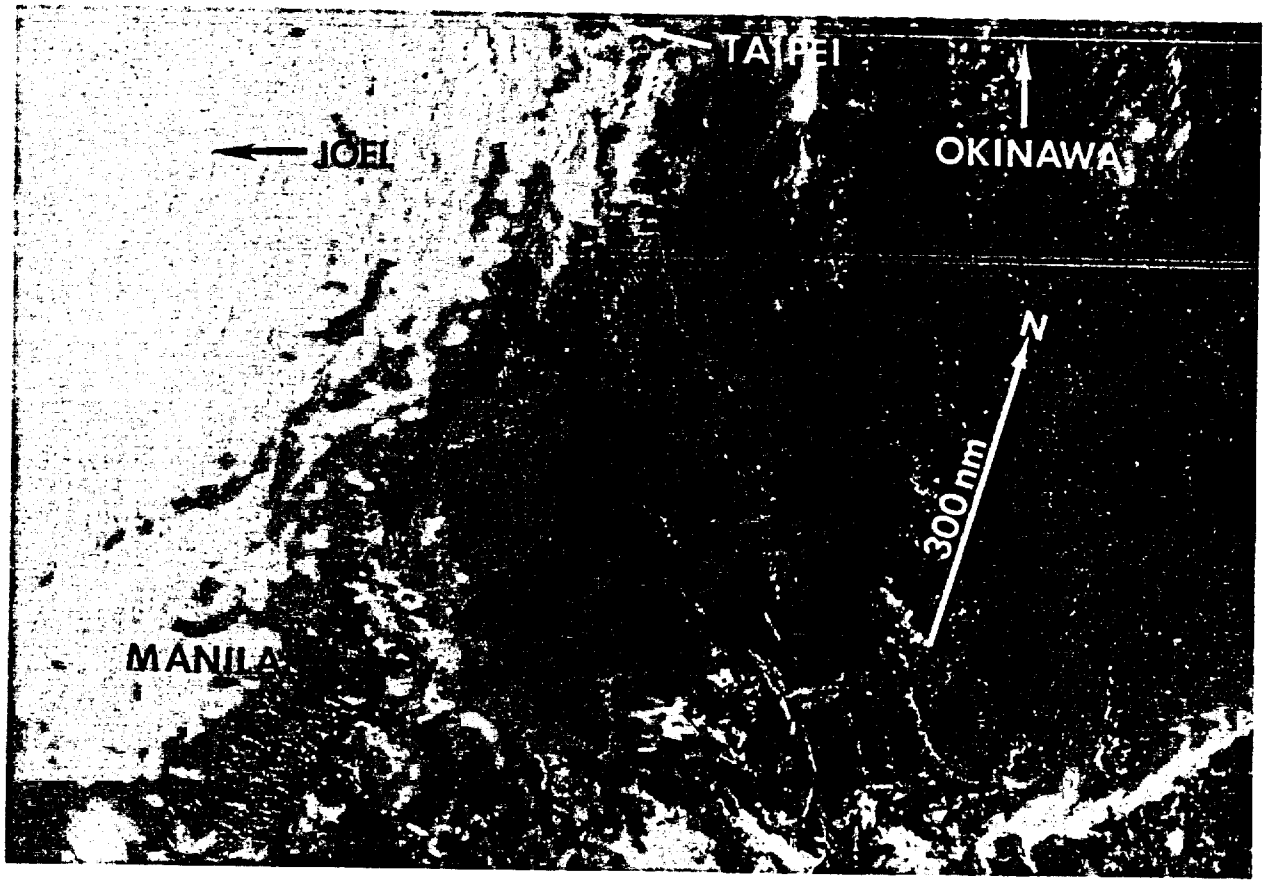

Figure 3-18-1 The cloud shield of Tropical Storm Joel covers much of the South China Sea just prior to landfall (060033Z September DMSP visual imagery).

Joel's poorly organized, but persistent, convection was first mentioned on the 010600Z September Significant Tropical Weather Advisory. Falling surface pressures along with increasing cloud amount and organization prompted a Tropical Cyclone Formation Alert at 030930Z. The first warning followed, valid at 031800Z. The subsequent upgrade to tropical storm intensity at 041200Z, appeared, in post analysis, to be 12 hours premature. As Joel tracked westward in the South China Sea, a southwesterly monsoon surge enhanced the deep convection near the cyclone's center. Then the surge, in conjunction with mid-tropospheric troughing to the north which interrupted the steering flow, caused Joel to come to a halt. After little or no movement for six hours, the tropical cyclone slowly moved northward towards the break in the ridge and made landfall at 161200Z, 70 nm (130 km) east of Hong Kong. Aided by convergent low-level wind flow in the coastal zone, Tropical Storm Joel reached its maximum intensity of 55 kt (28 m/sec) before moving onshore and dissipating over the mountains inland.